

TANI et al.

Application No. 10/829,233

June 23, 2005

AMENDMENTS TO THE ABSTRACT:

Please delete the abstract in its entirety and substitute the new abstract attached hereto on a separate page.

ABSTRACT OF THE DISCLOSURE

A valve opening and closing control device of a type making use of a motor enhances driving performance of the motor and restricts heat generated by constituent elements. A bridge circuit of a motor driving circuit comprises three rows of arms comprising two switching elements connected in series to each other and two diodes connected in parallel to corresponding switching elements. The respective arms are connected in parallel to an electric source, and motor windings are connected to points of interconnection of the switching elements on the respective arms. After putting the respective switching elements of the arms in an ON state to carry an electric current to the windings, a control circuit causes the switching element in an ON state to be put as an electricity introduction stoppage element in an OFF state and causes the switching element of the same arm as that, on which the electricity introduction stoppage element is disposed, to be put in an ON state.